



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/735,475

12/12/2003

Francis T. McGreevy

24.355

4309

28785

7590

08/22/2006

JOHN R LEY, LCC

5299 DTC BLVD, SUITE 610

GREENWOOD VILLAGE, CO 80111

EXAMINER

CHANG, SUNRAY

ART UNIT

PAPER NUMBER

2121

DATE MAILED: 08/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/735,475

Applicant(s)

MCGREEVY, FRANCIS T.

Examiner

Sunray Chang

Art Unit

2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-68 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-68 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4 statements</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. Claims 1 – 68 are presented for examination.

Claims 1 – 68 are rejected.

***Information Disclosure Statement***

2. The information disclosure statements, (IDS) submitted on Dec. 12<sup>th</sup>, 2003, Apr. 26<sup>th</sup>, 2004, May 31<sup>st</sup>, 2005 and July 18<sup>th</sup>, 2005, have been considered by the examiner. Form PTO – 1449s have been initialed, signed, dated and attached with current office action.

***Change of Address / Power of Attorney***

3. The form, “Change of Address / Power of Attorney”, filed on Dec. 23<sup>rd</sup>, 2004 has been processed and documented.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1 – 4, 34 – 37, 40, 42 – 44, 66 and 67 are rejected** under 35 U.S.C. 102(b) as being anticipated by Fritz Peter (U.S. Patent No. 6,175,610 and referred to as **Peter** hereinafter).

**Regarding independent claim 1, 34, 40, 42, 66 and 67,**

Art Unit: 2121

**Peter** teaches,

- An electrosurgical generator [a control unit, Col. 1, lines 49 – 56] having a virtual control panel [a virtual system, Col. 1, line 57 – Col. 2, line 3] for controlling functionality of the electrosurgical generator [medical-technical system, electromechanical components, Col. 1, lines 12 – 17] in response to interrogation of an object interacting with a control panel image [detects the position and/or motion of an appendage of an operator on the projection surface, Col. 1, lines 43 – 49], the virtual control panel comprising:
  - a display surface structure having a display surface upon which the control panel image is located [Fig. 10];
  - a sensor positioned relative to the display surface structure to interrogate an interaction of the object with the control panel image at a location on the display surface [detects the position and/or motion of an appendage of an operator on the projection surface, Col. 1, lines 43 – 49] separated from the sensor [Fig. 10] and to supply an interaction signal indicative of interaction of the object with the control panel image [generates a detector output dependent on the detected position and/or motion ... is supplied to a control unit, which controls the system component dependent on the detected movement and/or position, Col. 1, lines , Col. 1, lines 43 – 56]; and
- a generator controller operative to control functionality [a control unit, Col. 1, lines 49 – 56] of the electrosurgical generator [medical-technical system, electromechanical components, Col. 1, lines 12 – 17], the generator controller receiving the interaction signal [detects the position and/or motion of an appendage of an operator on the projection surface, Col. 1, lines 43 – 49] and controlling functionality of the electrosurgical generator in response to the

Art Unit: 2121

interaction signal [generates a detector output dependent on the detected position and/or motion ... is supplied to a control unit, which controls the system component dependent on the detected movement and/or position, Col. 1, lines , Col. 1, lines 43 – 56].

**Regarding dependent claims 2 and 35,**

- the sensor optically interrogates interaction of the object with the control panel image.  
[detecting movements of a hand, Abstract & Col. 4, lines 1 – 8]

**Regarding dependent claims 3, 37 and 43,**

- a projector positioned relative to the display surface structure to project optically the control panel image on the display surface. [a projection unit on the ceiling ... projects images of operating elements, Col. 3, lines 41 – 62]

**Regarding dependent claims 4, 36 and 44,**

- the control panel image is printed and attached to the display surface. [Fig. 10]

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2121

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. **Claims 5 – 15, 39, 41, 46 – 52 and 54 – 56 are rejected** under 35 U.S.C. 103(a) as being unpatentable over **Peter**, in view of Carlo Tomasi et al. (U.S. Patent No. 6,710,770 and referred to as **Tomasi** hereinafter).

(**Peter** as set forth above generally discloses the basic inventions.)

**Peter** teaches,

- An electrosurgical generator [a control unit, Col. 1, lines 49 – 56] having a virtual control panel [a virtual system, Col. 1, line 57 – Col. 2, line 3] for controlling functionality of the electrosurgical generator [medical-technical system, electromechanical components, Col. 1, lines 12 – 17] in response to interrogation of an object interacting with a control panel image [detects the position and/or motion of an appendage of an operator on the projection surface. Col. 1, lines 43 – 49]
- a display surface structure having a display surface upon which the control panel image is located [Fig. 10];
- an exterior housing; [Fig. 7, ceiling]
- the display surface structure is a portion of the housing. [Fig. 7, ceiling mount]

Art Unit: 2121

- the display surface structure is separate from the housing. [37, Fig. 7]

**Tomasi** further teaches,

- the display surface structure is a portion of the housing. [PDA been attached to the tabletop, see fig. 1A, 1B, 1C, 5A, 5B, 5C].
- the display surface structure is separate from the housing. [PDA can be detached away from the tabletop, see fig. 1A, 1B, 1C, 5A, 5B, 5C]
- a wireless communication link. [fig. 1A, 1B, 1C, Col. 6, lines 39 – 42]
- sterilizable [**Peter** teaches a medical system which should be inherent to be sterilizable, or it cannot be used in medical service], disposable surface and sensor. [a PDA, which can be removed from the table, which means it is disposable; basically, everything in the whole world is disposable.]

for the purpose of sensing proximity of a stylus or user finger relative to a device to **input** or **transfer** commands and/or data to a system, such sensing relative to a virtual device used to input or transfer commands and/or data and/or other information to a system [Col. 1, lines 25 – 30].

6. **Claims 16 – 21, 38, 45, 53, 57 are rejected** under 35 U.S.C. 103(a) as being unpatentable over **Peter**, in view of **Tomasi**, further in view of Frank P. Carau, Sr. (U.S. Patent No. 6,266,048 and referred to as **Carau** hereinafter).

**Peter** teaches,

- An electrosurgical generator [a control unit, Col. 1, lines 49 – 56] having a virtual control panel [a virtual system, Col. 1, line 57 – Col. 2, line 3] for controlling functionality of the

Art Unit: 2121

electrosurgical generator [medical-technical system, electromechanical components, Col. 1, lines 12 – 17] in response to interrogation of an object interacting with a control panel image [detects the position and/or motion of an appendage of an operator on the projection surface. Col. 1, lines 43 – 49]

**Tomasi** teaches,

- the display surface structure is a portion of the housing. [PDA been attached to the tabletop, see fig. 1A, 1B, 1C, 5A, 5B, 5C].
- the display surface structure is separate from the housing. [PDA can be detached away from the tabletop, see fig. 1A, 1B, 1C, 5A, 5B, 5C]
- a wireless communication link. [fig. 1A, 1B, 1C, Col. 6, lines 39 – 42]
- sterilizable [**Peter** teaches a medical system which should be inherent to be sterilizable, or it cannot be used in medical service], disposable surface and sensor. [a PDA, which can be removed from the table, which means it is disposable; basically, everything in the whole world is disposable.]

**Carau** teaches,

- A projected display onto a substantially flat surface, white surface to create a virtual computer screen display and a projected keyboard onto the substantially flat surface [Col. 1, lines 56 – 65] and a laser sensors at the bottom edge of the PDA cards with detect which key is being indicated; [Col. 2, lines 23 – 33]
- Projecting a display area of the control panel image and contact control area on the display surface; [Fig. 1 – 3; Col. 1, lines 56 – 65]

for the purpose of providing a space saving virtual display/keyboard for a PDA. [Col. 1, lines 7 – 8]

7. **Regarding dependent claims 22 – 33, 58 – 65 and 68,**

**Tomasi** further teaches,

- a light source which scans a transmitted light beam over the contact control areas of the control panel image [OS1 emits a fan-beam plane of optical energy parallel to a planar work surface upon which there is defined a virtual input device ... defines a fan angle and is spaced-apart from the work surface, Col. 5, lines 31 – 54], and
- a light receptor sensor which receives a received light beam created by reflection of the transmitted light beam from the object; [the optical energy plane is penetrated, the intersection of the penetrating object is detected by OS2, Col. 8, lines 33 – 37] and
- the virtual control panel further comprises: a device controller connected to the light source and the light, receptor sensor, the device controller operatively controlling the light source to scan the transmitted light beam over the contact control areas at a predetermined scanning angle at each instance of time, [Fig. 1s, Fig. 2s, Fig. 3s and Fig. 5s] and
- the device controller operatively determining the interaction of the object with a contact control area based on the scanning angle and the received light beam. [the location of the penetration can be determined by processing unit associated with the system, Col. 8, lines 36 – 37]

Art Unit: 2121

- shielding the control panel image from being washed out by ambient light. [filtering to reduce the effects of ambient light, Col. 6, lines 67]


for the purpose of providing a space saving virtual display/keyboard for a PDA. [Col. 1, lines 7 – 8]

### Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sunray Chang whose telephone number is (571) 272-3682. The examiner can normally be reached on M-F 7:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on (571) 272-3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-746-3506.

  
Anthony Knight  
Supervisory Primary Examiner  
Group Art Unit 2121  
Technology Center 2100  
U.S. Patent and Trademark Office

August 16, 2006